

### REMARKS

In an Office Action mailed on December 2, 2004, claims 36-44 were rejected under 35 U.S.C. § 102(b) as being anticipated by Bernhardt; and claims 45 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bernhardt in view of Chau. The Abstract has been amended to overcome the objection to the abstract. The §§ 102 and 103 rejections are addressed below.

#### § 102 Rejections of Claims 36-40:

The semiconductor structure of independent claim 36 includes a substrate that contains a germanium region; a metal contact; and a germanide layer that is located between the germanium region and the metal contact.

Contrary to the limitations of independent claim 36, Bernhardt discloses a gallium arsenide (GaAs) substrate 11 and discloses a contact layer 23. Bernhardt also mentions that the GaAs substrate 11 is a species of a broader III-V compound semiconductor. *See, for example*, Bernhardt, 2:33-38. However, Bernhardt does not specifically disclose that the substrate 11 is a germanium substrate; and for at least this reason, Bernhardt fails to anticipate independent claim 36.

More specifically, the specification of the present application discusses at length a sonic technique to etch a metal, such as nickel, in a semiconductor structure that includes a germanide film and a germanium-containing substrate without etching the germanide films and any germanium regions of the substrate. However, Bernhardt fails to teach any technique to ensure a germanium region or film would not be etched away during the etching of a metal. Therefore, not only does Bernhardt fail to anticipate independent claim 36, Bernhardt fails to render independent claim 36 obviousness.

Applicant also requests the Examiner to specifically consider the limitations of dependent claim 38, a claim that recites that the germanide layer includes a nickel germanide layer. Thus, for similar reasons to those pointed out above, Bernhardt fails to specifically teach a technique for etching a nickel germanide layer in conjunction with a substrate that contains a germanium region.

Dependent claims 37-40 are patentable for at least the reason that these claims depend from an allowable independent claim. Therefore, for at least the reasons that are set forth above, withdrawal of the § 102 rejections of claims 36-40 is requested.

Rejections of Claims 41-46:

The apparatus of independent claim 41 includes a transistor drain region, a transistor source region, a first metal contact and a second metal contact. The apparatus also includes a first germanide layer that is located between a germanium region of a semiconductor structure and the first metal contact and a second germanide layer that is located between the germanium region and the second metal contact.

See discussion of independent claim 36 above. In particular, Bernhardt fails to anticipate independent claim 41 for at least the reason that Bernhardt fails to disclose a germanide layer that is located between a germanium region of a semiconductor structure and a metal contact. Thus, although Bernhardt discloses a GaAs substrate, Bernhardt fails to specifically disclose a germanium substrate and does not even contemplate the use of such a substrate, as Bernhardt fails to disclose how to form a semiconductor structure that includes a germanide layer and germanium substrate. Therefore, for at least this reason, Bernhardt does not teach or even suggest claim 41.

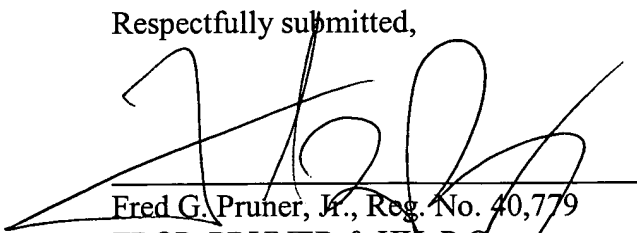
Claims 42-46 are patentable for at least the reason that these claims depend from an allowable independent claim. Therefore, for at least the reasons that are set forth above, withdrawal of the §§ 102 and 103 rejections of claims 41-46 is requested.

CONCLUSION

In view of the foregoing, withdrawal of the §§ 102 and 103 rejections and a favorable action in the form of a Notice of Allowance are requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (ITL.0894D1US).

Respectfully submitted,

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